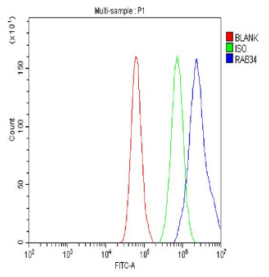
RAB34 Antibody / Ras-related protein Rab-34 (FY12985)

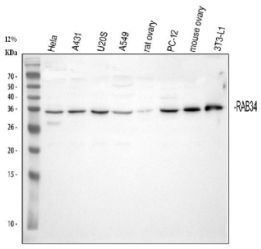
Catalog No.	Formulation	Size
FY12985	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9BZG1
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This RAB34 antibody is available for research use only.



Flow Cytometry analysis of cells using anti-RAB34 antibody. Overlay histogram showing cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-RAB34 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of RAB34 using anti-RAB34 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human whole cell lysates, Lane 3: human U2OS whole cell lysates, Lane 4: human whole cell lysates, Lane 5: rat ovary tissue lysates, Lane 6: rat PC-12 whole cell lysates, Lane 7: mouse ovary tissue lysates, Lane 8: mouse 3T3-L1 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-RAB34 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A single band is detected at ~34 kDa, running above the ~29 kDa prediction. The higher apparent MW is characteristic of lipid-modified Rab GTPases; C-terminal geranylgeranylation (Â± palmitoylation) alters SDSâ€“PAGE mobility without large mass increase, yielding an observed size near 34 kDa.

Description

RAB34 antibody detects Ras-related protein Rab-34, a small GTPase involved in vesicular trafficking, lysosome positioning, and Golgi organization. The UniProt recommended name is Ras-related protein Rab-34 (RAB34). This protein functions as a molecular switch cycling between GTP-bound active and GDP-bound inactive states, controlling membrane dynamics and cargo transport in endocytic and secretory pathways.

Functionally, RAB34 antibody identifies a 259-amino-acid cytosolic protein anchored to the Golgi apparatus through its C-terminal prenylation motif. In its GTP-bound state, RAB34 recruits effector proteins that regulate vesicle budding, movement, and fusion. It plays a key role in positioning lysosomes near the perinuclear region by interacting with the motor protein RILP and the lysosomal GTPase RAB7A. Through this mechanism, RAB34 coordinates lysosomal trafficking and degradation of cellular cargo.

The RAB34 gene is located on chromosome 17q11.2 and is expressed in multiple tissues, including brain, liver, and epithelial cells. Its activity supports vesicular transport processes essential for endosome maturation and Golgi integrity. RAB34 also contributes to the formation of ruffled plasma membranes and macropinosomes, thereby facilitating nutrient uptake and receptor internalization. In the Golgi network, it assists in maintaining cisternal stacking and trafficking of glycoproteins to the plasma membrane.

In cell signaling, RAB34 regulates the transport of signaling receptors such as EGFR and PDGFR, influencing downstream MAPK and AKT pathway activation. Dysregulation of RAB34 expression has been linked to cancer progression, where it affects migration, invasion, and exosome secretion. Elevated RAB34 expression correlates with poor prognosis in several cancers, including glioma, pancreatic carcinoma, and hepatocellular carcinoma, suggesting a role in tumor metastasis and lysosome-mediated proteolysis.

RAB34 antibody is commonly used in cell biology, vesicular transport, and cancer research. It is suitable for immunoblotting, immunofluorescence, and co-localization studies to visualize Golgi and lysosomal compartments. This antibody enables detailed examination of RAB34 function in intracellular trafficking, receptor recycling, and organelle positioning. Its detection aids in exploring the role of RAB GTPases in membrane transport and signal regulation.

Structurally, RAB34 shares the conserved GTP-binding motifs found in the RAS superfamily and undergoes prenylation at its C-terminal CAAX box for membrane anchoring. It cycles between active and inactive states under the control of guanine nucleotide exchange factors (GEFs) and GTPase-activating proteins (GAPs). NSJ Bioreagents provides RAB34 antibody reagents validated for use in vesicle trafficking, Golgi organization, and tumor biology research.

Application Notes

Optimal dilution of the RAB34 antibody should be determined by the researcher.

Immunogen

E.coli-derived human RAB34 recombinant protein (Position: M1-P259) was used as the immunogen for the RAB34 antibody.

Storage

After reconstitution, the RAB34 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.